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David Albright

U.S. Environmental Protection Agency, Region 9 Manager, Drinking Water Protection Section, WTR-9 75 Hawthorne Street San Francisco, CA 94105

Dear Mr. Albright and Mr. Montgomery,

March 14, 2016

Proposed Arroyo Grande Oil Field Aquifer Exemption

On Feb. 8, 2016 California's Division of Oil, Gas and Geothermal Resources (DOGGR) recommended an aquifer exemption for Class II injection wells in the Arroyo Grande oilfield operated by Freeport McMoRan. Under the Safe Drinking Water Act, the EPA must approve this exemption before it is valid. I'm writing to urge you to deny this aquifer exemption until updated groundwater modeling and seismic technology can be reviewed in light of the current 400-well expansion and future plans for ten-fold expansion.

As the former mayor of the neighboring City of Grover Beach, I have carefully followed and researched this issue because we share the same aquifer. The unique geology and geography of our region hugely impacts the water supply and the quality of life of over 100,000 people in several small towns and rural areas.

I attended the September 21, 2015 Aquifer Exemption Public Hearing in San Luis Obispo. While I appreciate the DOGGR and State Water Board (SWB) outreach to the community, it was at best perfunctory. SWB Chief Deputy Director Jonathan Bishop stated they were not there to answer questions¹ and confirmed that the technical review done by the 14 SWB and DOGGR staff was not available to the public for review.²

In approving the Exemption DOGGR stated, "The Division and the Water Boards also preliminarily concur that the injected fluid is expected to remain in the area that would be exempted and is not expected to affect the quality of water that is, or may reasonably be, used for any beneficial use, due to geologic conditions and hydraulic controls." In the absence of up to date independent evaluation of the aquifer, "expectation" is insufficient basis for compromising the health and safety of those who rely on an aquifer for drinking water and agriculture, especially in light of multiple local accounts of cross contamination. Most recently the county of San Luis Obispo County documented cross contamination of adjacent aquifers following increased deep well drilling in both the Paso Robles Basin and in Los Osos. There was no "expectation" of contamination in these aquifers either, yet it now occurs with deep well drilling on a much smaller scale than the current and proposed drilling at Freeport McMoRan.

In relying on the documentation provided by the applicant, DOGGR overlooks a clear conflict of interest as well as the findings and testimony of local agencies, neighboring property owners, and long time local residents. There is substantial correspondence and testimony of oil and water incidents --- of hydrological

¹ftp://ftp.consrv.ca.gov/pub/oil/District%203/Public%20Comments/Court%20Reporter/Arroyo%20Grande%20Hearing%20Transc ript.pdf p. 53

²ftp://ftp.consrv.ca.gov/pub/oil/District%203/Public%20Comments/Court%20Reporter/Arroyo%20Grande%20Hearing%20Transcript.pdf p. 99

connectivity crossing the boundaries DOGGR relied on to approve the exemption. The Northern Cities Management Area agencies of Pismo Beach, Grover Beach, Oceano and Arroyo Grande, who share the aquifer in question, in a December 2015 Study³ of the Santa Maria aquifer, have mapped (enclosed) multiple oil and water wells side by side just South of the Arroyo Grande Oil Fields, calling into question the theory of a completely isolated oil basin with no connectivity.

DOGGR expectations cite a fault line as the safe barrier between the oil field basin and adjacent groundwater. Over the past decade several new fault lines have been mapped in the oil field vicinity. The potential seismic impact is now considered to be more intense than previously thought. This new information and the effects of seismic activity must be evaluated in light of the ongoing extreme drought and additional expansion before concluding that this sub basin has no connectivity with the larger aquifer.

This new seismic information and groundwater study are critical in light of plans to expand daily oil production 10-fold. Freeport McMoRan states the water requirement for current operations is far higher than originally anticipated. Expansion on this scale must consider the impact on groundwater use. The analysis of the aquifer exemption is based only on current water extraction and injection. There is no analysis of impacts to the aquifer if that 400-well expansion proceeds -- including possible changes in pressure, potential for inducing fractures, subsidence, water quality, or the chemicals that will be used.

All of this must also be considered in light of the environmental track record of oil companies in San Luis Obispo County:

- In 1926 a San Luis Obispo tank farm fire burned so intensely that it created its own weather system.
 Millions of barrels of oil were released below ground leaving ground water impacts that remain today.
- 2. Pipeline leaks discovered in 1977 when a building exploded, destroyed the town of Avila Beach. Avila cannot now rebuild its damaged pier because doing so may release oil contamination that was buried, rather than removed from their fishing harbor.
- 3. A 1986 isobutene tanker derailment caused a third of my city to be evacuated.
- 4. From 1946-1994, 18 MILLION gallons of diluent from pipelines in the Oceano dunes settled atop our basin's shallow aquifer, destroying it. Polluted sand from these forty diluent plumes is still being hauled to the landfill upstream of our watershed.
- 5. These incidents all took place within 10 miles of the DOGGR exemption site. The exemption applicant, Freeport McMoRan, has merged with PXP, the company whose pipelines leaked at Refugio Beach in 2015, just 60 miles south of us. This pattern must not be ignored.

Nothing adds to understanding as does a site visit. I urge you to visit our community and hold a public hearing before making your decision, to make the information relied upon available to the public prior to the hearing, and to require that all testing be done by an independent third party. It is my understanding that the legal directive is that presumption favors protecting groundwater. Please presume in favor of protecting the groundwater of a thriving agricultural and tourism based coastal community of 100,000 that relies on the health and safety of this aquifer. Thank you for your public service.

Sincerely,

Debbie Peterson

Cc: Michael Montgomery

³file:///C:/Users/Debbie/Desktop/NCMA%20Aquifer%20study%20SMBC_Final_123015_txt%20tables%20and%20plates.pdf Santa Maria Basin Characterization Study December 2015

